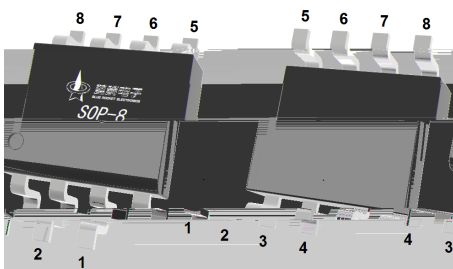


$V_{DS}(V)=30V$ $I_D=12.3A$
 $R_{DS(ON)}@10V<12m\Omega$ (Typ. $8.7m\Omega$)
 $R_{DS(ON)}@4.5V<20m\Omega$ (Typ. $11.5m\Omega$)

Qualified to AEC-Q101 Standards for High Reliability,

HF Product.

, Meet the stringent requirements of automotive applications.



PIN1	S1	PIN 2	G1	PIN 3	S2	PIN 4	G2
PIN 5	D2	PIN 6	D2	PIN 7	D1	PIN 8	D1

See Marking Instructions.

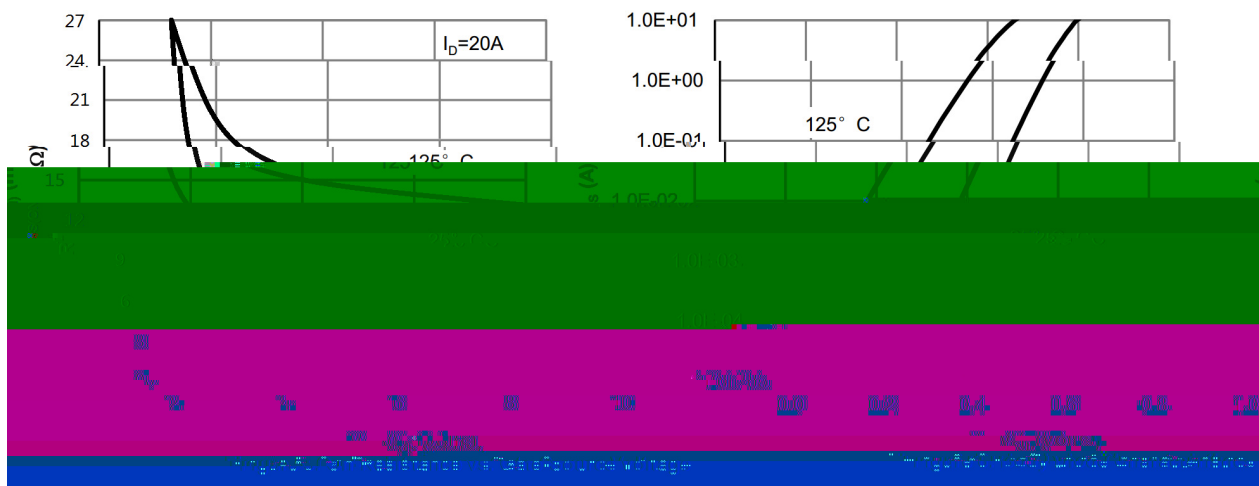
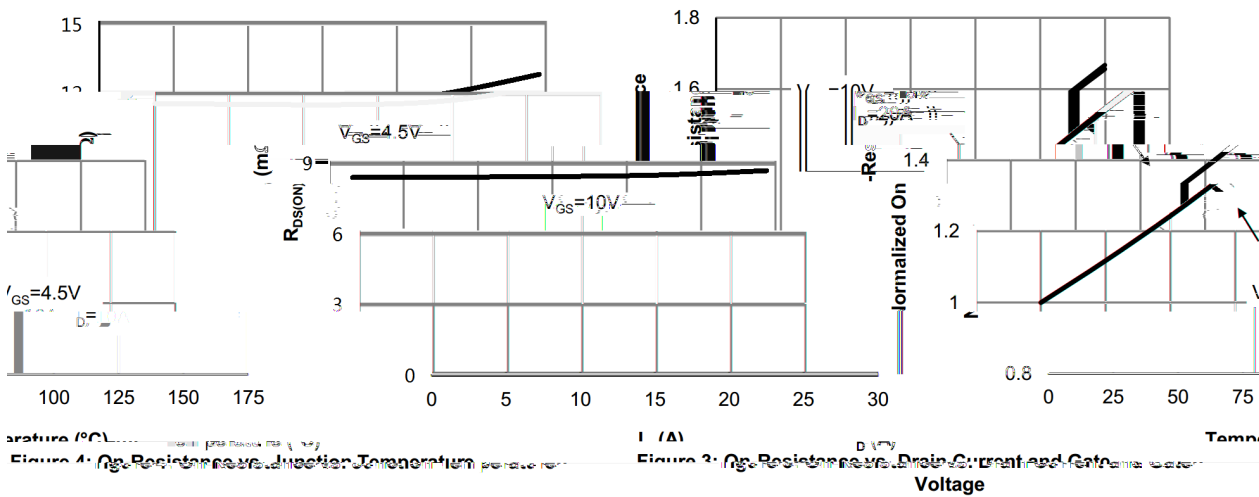
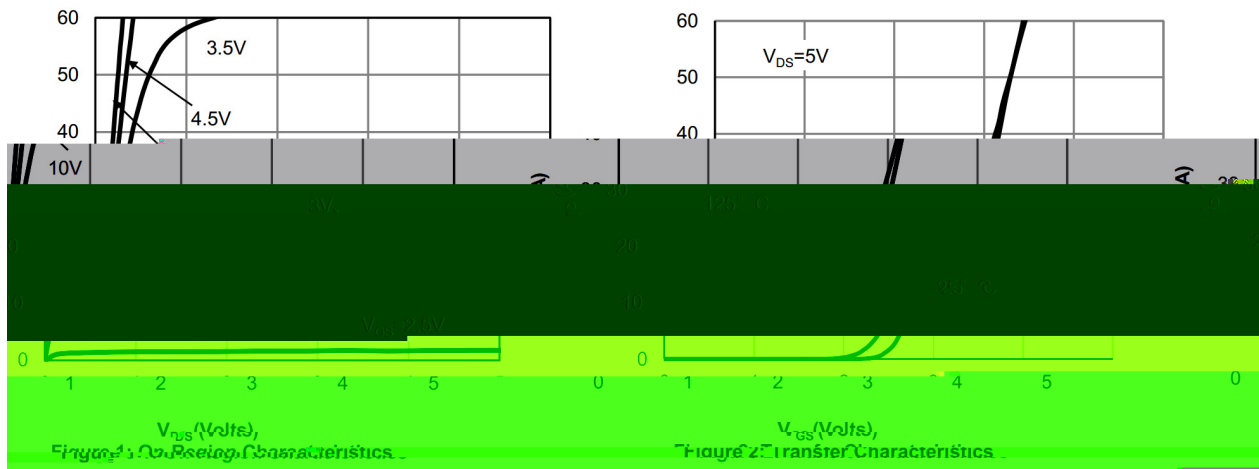
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	12.3	A
Pulsed Drain Current	I_{DM}	46.5	A
Power Dissipation	P_D	3	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	
Maximum Junction-to-Ambient	$R_{JA}(\text{Steady-State})$	41.7	/W

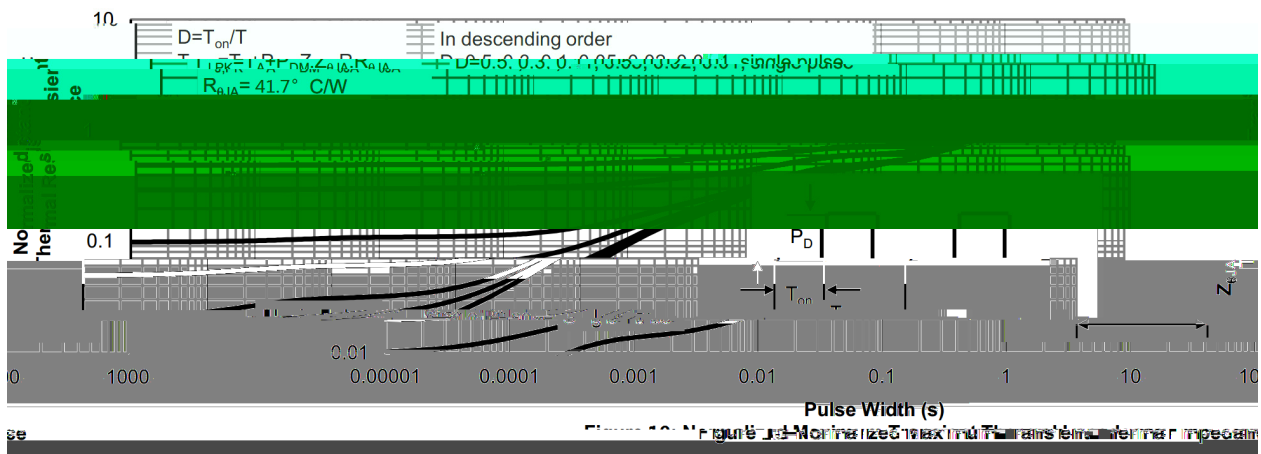
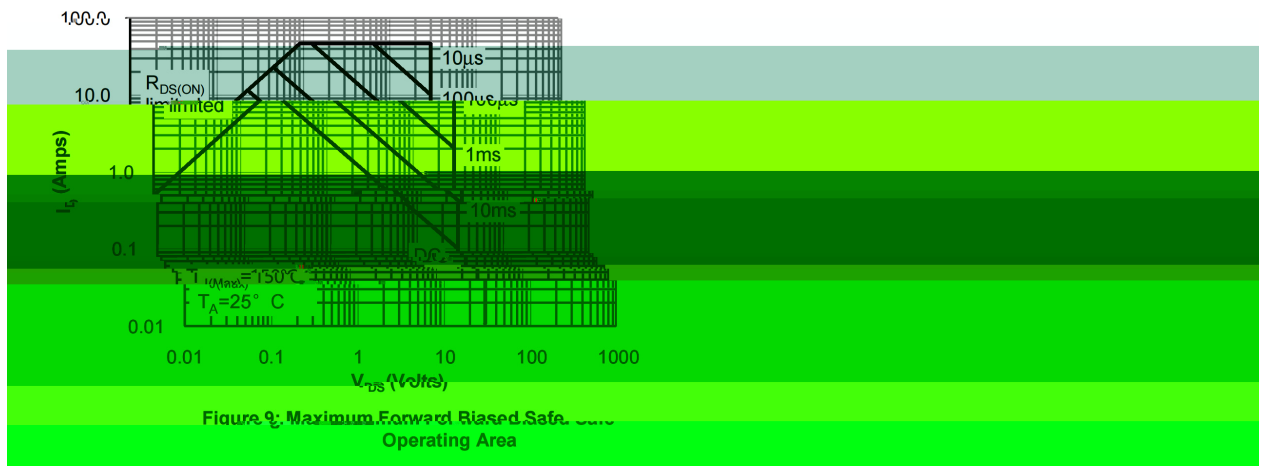
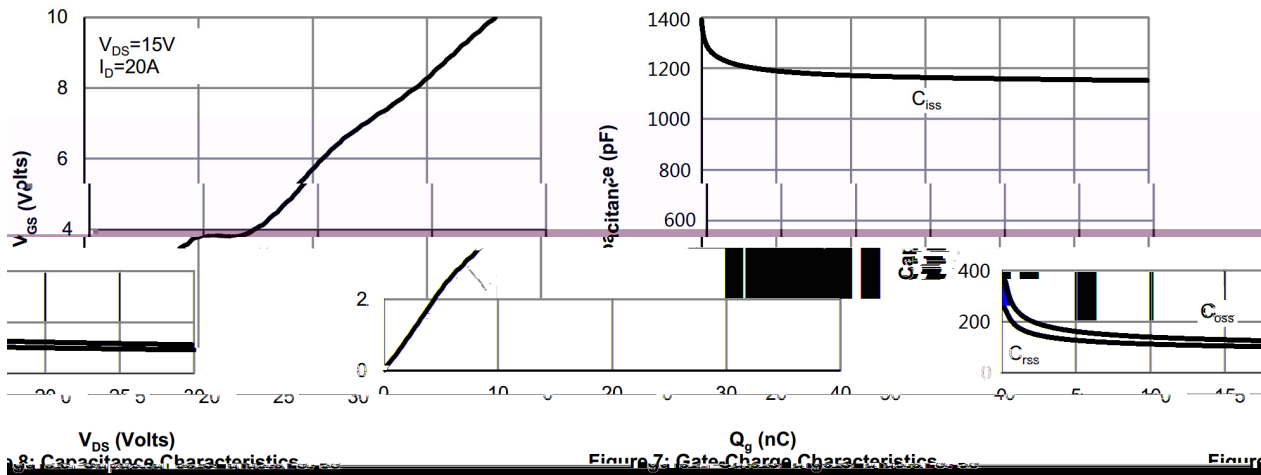
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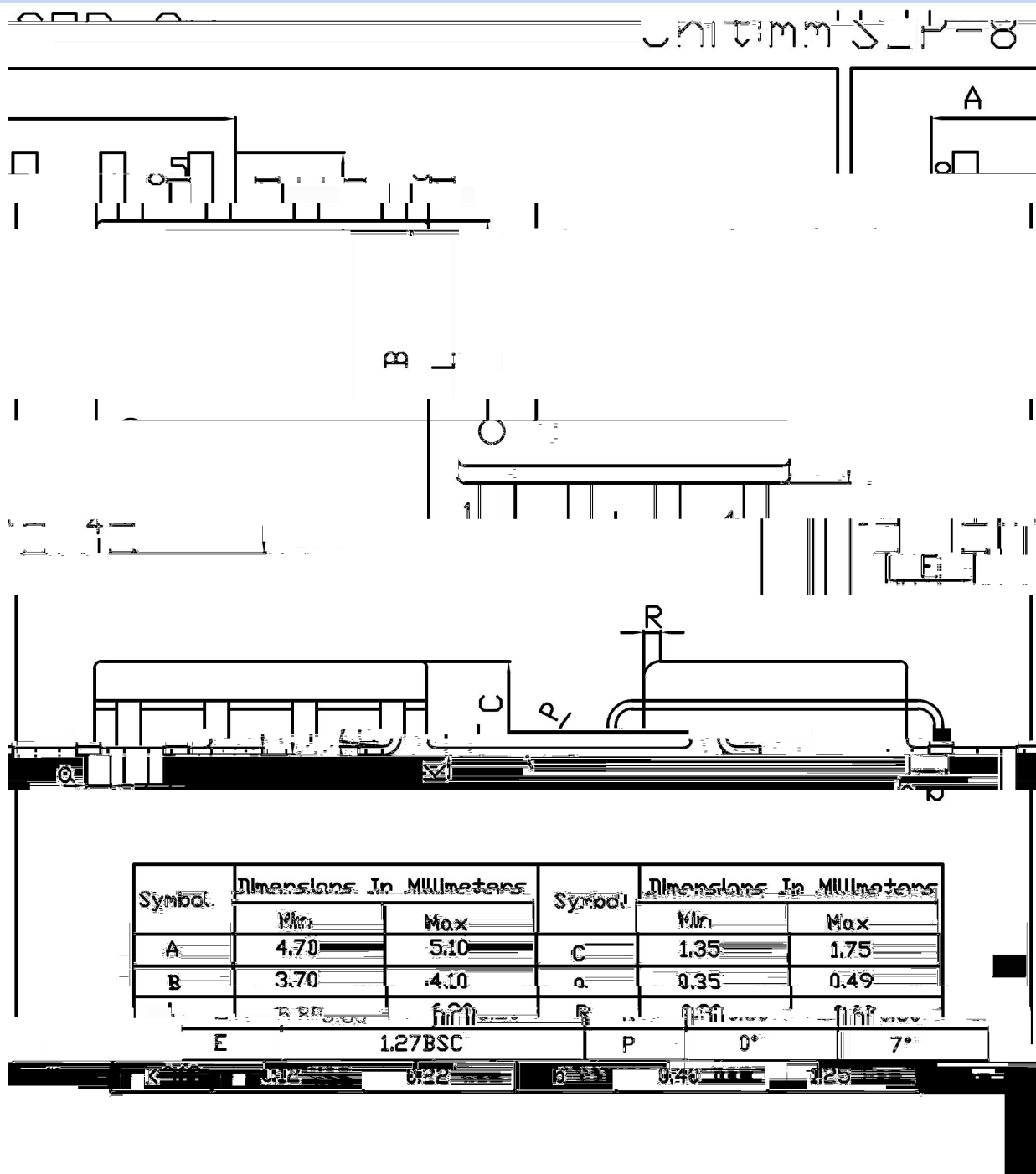
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$V_{GS}=0V$ $I_D=250\mu A$	30	36.5		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V$ $V_{GS}=0V$			1	μA
Gate-Body leakage current	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		8.7	12	m Ω
		$V_{GS}=4.5V$ $I_D=10A$		11.5	20	m Ω
Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1.0A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1200		pF
Output Capacitance	C_{oss}			125		pF
Reverse Transfer Capacitance	C_{rss}			100		pF
Gate resistance	R_g	$V_{DS}=0V$ $V_{GS}=0V$ $f=1.0MHz$		3.7		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=15V$ $I_D=20A$		40		nC
Total Gate Charge	$Q_{g(4.5V)}$			22		nC
Gate-Source Charge	Q_{gs}			11		nC
Gate-Drain Charge	Q_{gd}			5		nC

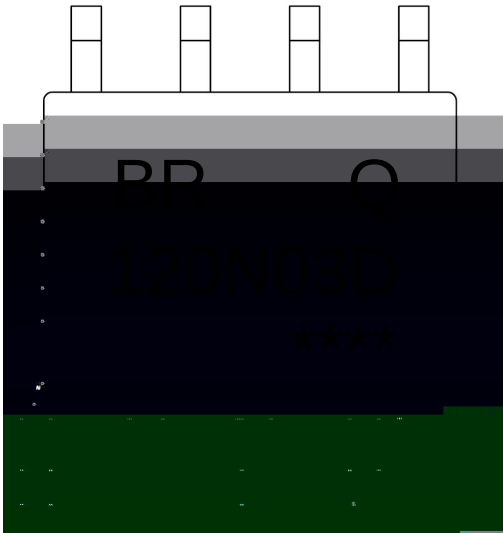
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Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=15\text{ V}$ $R_L=0.75\Omega$ $V_{GS}=10\text{V}$ $R_{GEN}=3\Omega$		11		ns
Turn-On Rise Time	t_r			14		ns
Turn-Off Delay Time	$t_{d(off)}$			38		ns
Turn-Off Fall Time	t_f			10		ns







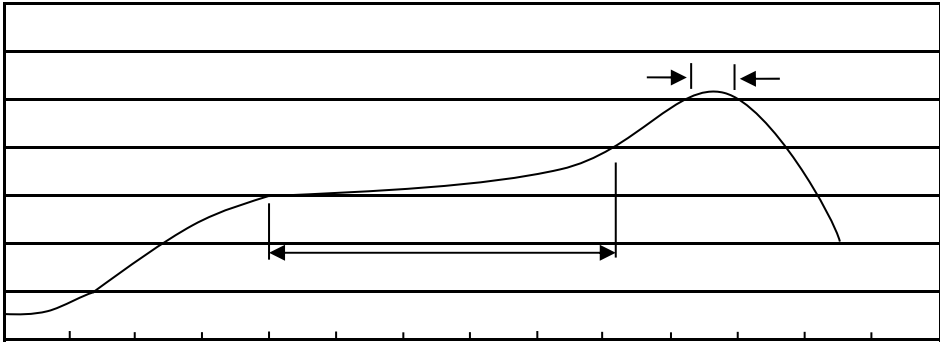


BR
Q
120N03D

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
120N03D:	Product Type Code
****:	Lot No. Code, code change with Lot No

Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 2

255 5

5 0.5sec;

2.Peak Temp.:255 5 , Duration:5 0.5sec.
- 3

2 10

/sec.

3. Cooling Speed: 2~10 /sec.

260 5

10 1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOP/ESOP-8	4,000	2	8,000	6	48,000	13 ×12	360×360×50	380×335×366